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# STATISTICAL ANNEX

The statistical needs of services trade negotiators, as well as those of national policy-makers, have not been met so far by the available data. Balance-of-payments statistics underestimate trade in services and basically cover cross-border and consumption abroad modes of supply. Governments have not collected data in a systematic fashion, and the data that are available are highly aggregated and not internationally comparable. Cross-border intrafirm electronic services transactions are not recorded in balance-of-payments statistics, and the sales and purchases of foreign-owned enterprises established in host countries (considered to constitute "trade" under the GATS) is not recorded. In-house services are recorded under the goods sector, and certain services may not be reported to avoid taxation. There is therefore a need to improve statistics before the next round of services negotiations. UNCTAD has joined inter-agency efforts to improve statistics on trade in services and is developing a database on Measures Affecting Services Trade (MAST).

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**Development of the framework for trade in services statistics in the GATS context: the presence of natural persons**

1. UNCTAD has joined the efforts of the inter-agency task force created to develop the first manual on international trade in services statistics, and it has proposed extending the exercise beyond the statistical framework for foreign affiliates' trade in services to include also the development of the framework for statistics on movement of natural persons. According to the GATS, the trade-in-services-related presence of natural persons in a foreign country labour market should be time-limited (as opposed to settlement) and connected to the provision of services. Services of natural persons could be supplied independently (including as business visitors), or through employment in foreign controlled firms (as specialists or intra-corporate transferees or in senior management positions) or alternatively on the basis of a services contract signed with a foreign or nationally controlled firm. In all cases, a wide range of activities and skill levels are involved. To grasp these diverse categories, the GATS services sectoral classification is not likely to suffice. In addition, since the presence of natural persons may not be separated from commercial presence in some instances, sectoral classification should be compatible with that of the foreign affiliate trade in services. Statistics sought for the presence of natural persons are not limited to obtaining their total numbers, but also cover income earned, countries of origin and duration of stay, as well as qualitative characteristics, including education and experience, etc. A distinction is made in the statistical sense between the movement of natural persons ("the flow") and the presence of natural persons ("the stock") in a given country at any given point in time. Measuring the services-trade-related foreign labour stock poses more problems for statistical data collection.

2. The development of the relevant statistical framework is limited by the costs associated with capturing these flows; problems of data reliability due to misrepresentation and missing information, and incompatibility of definitions for location and time periods selected render international data comparability difficult. Furthermore, there appear to be no internationally harmonized employment figures by activity available in which foreign workers would form a sub-set. In terms of statistical data availability, information for some categories of service providers would seem to be easier to obtain: enterprise surveys in the foreign affiliates trade data context would be likely to provide information on intra-corporate transferees and other foreign employees. In some countries, monitoring or control systems have been put in place for exports or imports of labour services, and information on lower-skilled labour employed in the services sector may thus be more readily available. More difficulties would arise in capturing independent service providers, as well as activities of business visitors. In addition, the type of contract would also determine the category to which the service provider would be assigned for statistical purposes.

3. The challenge is to develop a simple tool for international comparisons of trade in services through mode four that will impose a minimal additional burden on national statistical institutions and avoid duplication in collection. Any proposal for meeting the needs of the GATS will have to take account of the existing statistical frameworks and classification systems, principally those of the ILO and the UN, including the System of National Accounts (SNA), the International Standardized Industry Classification (ISIC), and the International Monetary Fund's Balance of Payments (BPM5) statistics.

All of these systems lack a number of features and have intrinsic data problems in the context of adequately addressing GATS needs. The BMP5 does not provide statistics on the activities of natural persons resident for more than a year, except that "workers' remittances" and "migrant transfers" record the money transfers they make. However, the latter does not distinguish between income earned in services or goods production. ILO employment statistics face compatibility problems with those in the SNA; a different sectoral classification is used, making the information obtained difficult to use. The ILO surveys are household-based, but do not account for multiple employment, while the SNA relies on the statistics of established enterprises that do not include the self-employed, or firms that fall below the set threshold size, which often tends to be the case of service-providing firms.

4. The UN Convention on the Protection of the Rights of All Migrant Workers (1990), though it did not define trade-related labour mobility, is the only international instrument that clarifies such temporary movements. However, the Convention's definition of what activities constitute services does not correspond to that of the GATS, since it excludes low-skilled workers in services sectors in some instances, while it partially includes those involved in manufacturing activities. The UN Recommendations on Statistics of International Migration, expected to be published shortly, are likely to provide additional insights into measuring international flows of people and information relevant for measuring trade-related movement of natural persons.

5. At present the aim is to build upon the strengths of the existing international statistical systems and to devise a conceptual framework and methodology suitable for GATS mode four statistical requirements. Based on the initial assessment, GATS needs in connection with mode four can only be met by going beyond the existing formally agreed international conventions and guidelines.

**Table 1**
**Distribution of world exports: 1990 and 1996**
*(Shares in per cent)*

| Sector | Developing economies[a] | | Developed economies | | Other economies[b] | |
|---|---|---|---|---|---|---|
| | 1990 | 1996 | 1990 | 1996 | 1990 | 1996 |
| Goods | 23.7 | 28.7 | 71.8 | 67.2 | 4.5 | 4.1 |
| Services: | 18.4 | 24.9 | 77.0 | 71.2 | 4.6 | 3.9 |
| Travel | 22.6 | 27.2 | 74.3 | 68.1 | 3.1 | 4.7 |
| Transport | 16.7 | 22.8 | 76.5 | 72.2 | 6.8 | 5.0 |
| Other services | 16.4 | 24.3 | 79.2 | 72.9 | 4.4 | 2.8 |

Source: Calculated from IMF balance-of-payments data.

[a] Excludes countries in Central Asia.
[b] Includes countries in Eastern Europe and Central Asia.

**Table 2**
**Average annual growth in world trade: 1990 and 1996**
**(Percentages)**

| Sector | Developing economies[a] | | Developed economies | | Other economies[b] | |
|---|---|---|---|---|---|---|
| | Exports | Imports | Exports | Imports | Exports | Imports |
| Goods | 10.9 | 12.5 | 6.2 | 5.5 | 5.8 | 4.4 |
| Services: | 13.0 | 9.3 | 6.0 | 5.6 | 4.5 | 7.0 |
| Travel | 11.8 | 12.9 | 6.8 | 5.7 | 16.4 | 12.9 |
| Transport | 11.1 | 9.5 | 4.5 | 4.6 | 0.3 | 7.0 |
| Other services | 15.1 | 7.5 | 6.3 | 6.2 | -0.1 | 8.0 |

Source: Calculated from IMF Balance of Payments data.

[a] Excludes countries in Central Asia.
[b] Includes countries in Eastern Europe and Central Asia.

**Table 3**
**Leading exporters and importers in world trade in commercial services, 1996**
*(Billion dollars and percentage change)*

| Rank | Exporters | Value | Share | Annual change | Rank | Importers | Value | Share | Annual change |
|---|---|---|---|---|---|---|---|---|---|
| 1 | United States | 202.0 | 16.2 | 7 | 1 | United States | 135.3 | 10.8 | 5 |
| 2 | France | 87.2 | 7.0 | -4 | 2 | Germany | 132.3 | 10.5 | 0 |
| 3 | Germany | 82.8 | 6.4 | 3 | 3 | Japan | 128.7 | 10.2 | 6 |
| 4 | United Kingdom | 74.9 | 6.0 | 6 | 4 | France | 70.4 | 5.6 | -2 |
| 5 | Italy | 69.1 | 5.6 | 6 | 5 | Italy | 66.9 | 5.3 | 3 |
| 6 | Japan | 66.4 | 5.3 | 4 | 6 | United Kingdom | 61.9 | 5.0 | 7 |
| 7 | Netherlands | 48.1 | 3.9 | 2 | 7 | Netherlands | 44.6 | 3.5 | -2 |
| 8 | Spain | 44.0 | 3.5 | 11 | 8 | Belgium-Luxembourg | 33.2 | 2.6 | 1 |
| 9 | Hong Kong, China | 38.9 | 3.1 | 9 | 9 | Korea, Rep. of[a] | 31.7 | 2.5 | 15 |
| 10 | Austria | 35.1 | 2.9 | 6 | 10 | Canada | 31.5 | 2.5 | 7 |
| 11 | Belgium-Luxembourg | 34.6 | 2.8 | 2 | 11 | Austria | 30.5 | 2.4 | 7 |
| 12 | Singapore[a] | 29.4 | 2.4 | 0 | 12 | China[a] | 26.3 | 2.1 | 7 |
| 13 | Switzerland[a] | 27.1 | 2.1 | ... | 13 | Taiwan, Prov. of China | 24.5 | 1.9 | 3 |
| 14 | Korea, Rep. of[a] | 25.3 | 2.0 | 1 | 14 | Spain | 23.9 | 1.9 | 11 |
| 15 | Canada | 23.1 | 1.9 | 9 | 15 | Hong Kong, China | 22.3 | 1.8 | 4 |
| 16 | China[a] | 20.5 | 1.7 | 11 | 16 | Thailand[a] | 20.9 | 1.7 | 12 |
| 17 | Australia | 18.1 | 1.5 | 17 | 17 | Sweden | 18.8 | 1.5 | 10 |
| 18 | Thailand[a] | 17.1 | 1.4 | 18 | 18 | Singapore[a] | 18.6 | 1.5 | 13 |
| 19 | Sweden | 17.0 | 1.4 | 12 | 19 | Australia | 18.1 | 1.4 | 10 |
| 20 | Taiwan, Prov. of China | 16.5 | 1.3 | 7 | 20 | Russian, Fed. | 17.2 | 1.4 | -9 |
| 21 | Denmark | 15.5 | 1.3 | 6 | 21 | Malaysia[a] | 16.9 | 1.3 | 18 |
| 22 | Norway[a] | 15.2 | 1.2 | ... | 22 | Norway[a] | 16.5 | 1.3 | ... |
| 23 | Turkey[a] | 15.0 | 1.2 | ... | 23 | Switzerland[a] | 15.8 | 1.3 | ... |
| 24 | Malaysia[a] | 14.1 | 1.1 | 27 | 24 | Brazil[a] | 15.2 | 1.2 | 15 |
| 25 | Russian Fed. | 10.6 | 0.9 | 6 | 25 | Denmark | 14.7 | 1.2 | 5 |
| | Total of above | 1047.8 | 83.2 | ... | | Total of above | 1036.7 | 81.8 | ... |
| | **World** | 1260.0 | 100.0 | 5 | | **World** | 1265.0 | 100.0 | 5 |

[a] WTO Secretariat estimates.
Source: WTO Annual Report 1997.
Note: Growth rates and ranking are sometimes affected by breaks in the time series due to different and/or changing statistical methods. See the Annual Report's technical notes. Annual statistics 1986-1996 are given in Appendix Tables A5 and A6. This table relates to Modes 1 and 2.

Table 4
GATS commitments for each mode of supply

| I. Market access | Cross-border | | | Consumption abroad | | | Commercial presence | | | Natural persons | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Full | Partial | No | Full | Partial | No | Full | Partial | No | Full | Partial | No |
| Business Services | 46% | 32% | 22% | 54% | 34% | 12% | 24% | 73% | 3% | 1% | 93% | 6% |
| Communication Services | 19% | 72% | 9% | 36% | 55% | 9% | 6% | 91% | 3% | 0% | 94% | 6% |
| Construction and Related Engineering Services | 26% | 12% | 62% | 53% | 32% | 14% | 29% | 64% | 7% | 0% | 97% | 3% |
| Distribution Services | 31% | 53% | 16% | 34% | 56% | 11% | 17% | 80% | 4% | 0% | 96% | 4% |
| Educational Services | 48% | 39% | 12% | 54% | 40% | 6% | 25% | 66% | 9% | 1% | 92% | 7% |
| Environmental Services | 17% | 21% | 62% | 51% | 35% | 14% | 26% | 74% | 0% | 1% | 97% | 3% |
| Financial Services | 21% | 33% | 46% | 34% | 42% | 24% | 14% | 84% | 2% | 2% | 90% | 8% |
| Health Related and Social Services | 44% | 4% | 52% | 71% | 21% | 8% | 19% | 77% | 4% | 0% | 94% | 6% |
| Tourism and Travel Related Services | 42% | 19% | 39% | 62% | 27% | 11% | 30% | 66% | 4% | 2% | 89% | 10% |
| Recreational, Cultural and Sporting Services | 48% | 29% | 23% | 56% | 40% | 4% | 20% | 71% | 9% | 1% | 91% | 8% |
| Transport Services | 29% | 31% | 41% | 47% | 47% | 6% | 16% | 76% | 8% | 1% | 95% | 5% |
| Other Services not included elsewhere | 11% | 44% | 44% | 11% | 78% | 11% | 0% | 78% | 22% | 0% | 100% | 0% |
| **II. National treatment** | **Cross-border** | | | **Consumption abroad** | | | **Commercial presence** | | | **Natural persons** | | |
| | Full | Partial | No | Full | Partial | No | Full | Partial | No | Full | Partial | No |
| Business Services | 50% | 27% | 22% | 60% | 27% | 13% | 57% | 38% | 5% | 10% | 82% | 9% |
| Communication Services | 39% | 51% | 10% | 40% | 48% | 12% | 32% | 62% | 5% | 7% | 84% | 9% |
| Construction and Related Engineering Services | 25% | 13% | 61% | 51% | 32% | 17% | 7% | 83% | 10% | 0% | 92% | 8% |
| Distribution Services | 30% | 55% | 15% | 35% | 56% | 9% | 14% | 83% | 3% | 0% | 96% | 4% |
| Educational Services | 42% | 48% | 9% | 49% | 45% | 5% | 8% | 73% | 19% | 1% | 92% | 7% |

| I. Market access | Cross-border | | | Consumption abroad | | | Commercial presence | | | Natural persons | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Environmental Services | 16% | 26% | 57% | 51% | 38% | 10% | 20% | 79% | 1% | 1% | 97% | 2% |
| Financial Services | 26% | 27% | 46% | 37% | 36% | 26% | 12% | 85% | 3% | 1% | 89% | 10% |
| Health Related and Social Services | 54% | 4% | 42% | 73% | 19% | 8% | 17% | 73% | 10% | 2% | 92% | 6% |
| Tourism and Travel Related Services | 48% | 16% | 36% | 68% | 19% | 13% | 61% | 33% | 6% | 13% | 73% | 13% |
| Recreational, Cultural and Sporting Services | 47% | 35% | 18% | 55% | 37% | 8% | 14% | 75% | 11% | 2% | 88% | 10% |
| Transport Services | 32% | 25% | 43% | 56% | 37% | 8% | 46% | 43% | 11% | 13% | 78% | 9% |
| Other Services not included elsewhere | 11% | 44% | 44% | 11% | 78% | 11% | 11% | 67% | 22% | 0% | 100% | 0% |

Note: Percentages may not add up to 100 due to rounding. Basis of total is listed sectors.

Notes:

1. This table analyses the commitments undertaken in the schedules of WTO Members for each mode of supply (cross-border supply, consumption abroad, commercial presence, and presence of natural persons) by classifying them into the following three categories:
   "Full": No limitations to market access or national treatment,
   "Partial": Commitments exist to grant market access or national treatment, but are subject to certain limitations.
   "No": No commitments in market access or national treatment.

   While the table reflects the results of the negotiations on basic telecommunications which entered into force on 5 February 1998, the results of the financial services negotiations concluded in December 1997 are not taken into account, since the latter commitments have not yet entered into force.

2. The denominator is the total number of commitments that can be made in the sectors and subsectors listed in the schedules of WTO Members. No account is taken in the calculations of the sectors or subsectors which were not listed in the schedules of Members.

3. Any measures restricting both market access and national treatment are scheduled in the market access column of the schedule in accordance with Article XX:2 of the GATS; therefore, the percentages indicated in the market access section of the table also take account of such measures.

Source: WTO Secretariat.

**Table 5**
**Estimates of market size for long-distance service exports from developing countries, 1990**
**(US$ billions)**

| Destination country | Potential value of long-distance service exports | |
|---|---|---|
| | Low estimate | High estimate |
| Canada | 1.8 | 5.3 |
| France | 2.2 | 6.5 |
| Germany | 6.3 | 18.9 |
| Italy | 2.6 | 7.9 |
| Japan | 9.6 | 28.8 |
| United Kingdom | 3.5 | 10.4 |
| United States | 14.4 | 43.1 |
| Total G-7 | 40.3 | 121.0 |

Note: The low estimate assumes that the share of jobs with a high potential for long-distance provision in the destination country that can actually be contested internationally is 10 per cent. The high estimate assumes this ratio to be 30 per cent. Long-distance services cover software and computer services, including back office services.

Source: Adapted from Apte, Uday, 1994. "Global Disaggregation of Services: Growth Engine for the Less Developed Countries?", World Bank, International Economics Department, Washington, D.C., U.S.A.; ILO (International Labour Organization), 1993, *Statistical Yearbook*, Geneva: International Labour Office; and national sources of labour statistics. Taken from Global Economic Prospects and the Developing Countries 1995, World Bank.